

RESEARCH ABSTRACT

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Study Title: Cave biology in the Mount St. Helens Cave Basalt lava flow

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Abstract: This study seeks to establish an inventory of species inhabiting and using lava tubes and caves in the Cave Basalt lava flow. Bat populations in caves are dominated by *Plecotus townsendii*. Of small mammal species inhabiting or using caves, deer mice (*Peromyscus maniculatus*) are most wide spread. Few amphibians were observed; the most significant amphibian finding was a population of Larch Mountain salamander (*Plethodon larselli*). 256 invertebrate species of which approximately 100 species are arthropods have been collected in caves.

Observation of deposits from the May 1980 eruption in this area revealed only mudflow and tephra deposits which for the most part did not threaten life in the caves. Due to the lack of population data for most of these species prior to 1980, it is unclear what the effects of the eruption have been, but they appear not to have been significant.

Secondarily, mudflow and tephra deposits in this area were monitored for movement and re-deposition. Measurements of the depth of deposits using rebar stakes or tree trunks showed little reworking or secondary deposition of mudflow material or tephra in this area.

Type of Measurement(s): Most species have been described from sightings and observations. Pitfall traps were used to sample invertebrate populations.

Frequency of Measurement(s): Bat observations have been made since 1964, once or twice per year. Intensive population studies were made in spring and early summer and autumn of 1983. Post-eruption observations were made in summer 1980. Fly netting was conducted from 1985-1987.

Data Storage: Floppy disks in Wordstar in personal possession. Specimens are stored at the Burke Museum,

University of Washington. Data are in an unpublished inventory provided in a contract report by Senger and Crawford, 1984, at Mount St. Helens, National Volcanic Monument Headquarters.

Long-term plans: Data available for collaborative efforts: The mudflow and tephra deposit study was completed in 1987 and rebar markers were removed. Senger is continuing work with fungus flies found in cave entrances. He is willing to collaborate on future cave biology studies.